



Dongfeng Cummins Curve and Datasheet

Engine Type: ISDe180 30(Truck)

Curve Number: FR92152



Dongfeng Cummins Engine Co.,Ltd

Engine Performance Curve FR92152

EURO 3

Engine Model: ISDe180 30

Engine Configuration: D323002BX03

Advertised Power: 136 kW @ 2500 rpm

CPL: 1982

185 PS @ 2500 rpm

Peak Torque: 650 N.m @ 1400 rpm

Displacement: 4.5 L

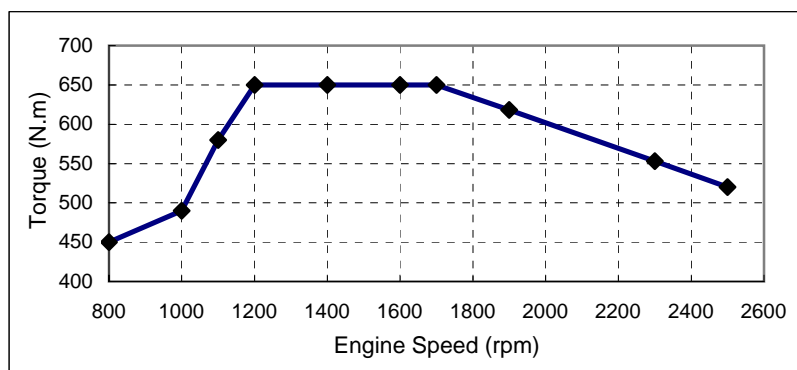
Bore: 107 mm

Aspiration: Turbocharged & Charge Air Cooled

Cylinders: 4

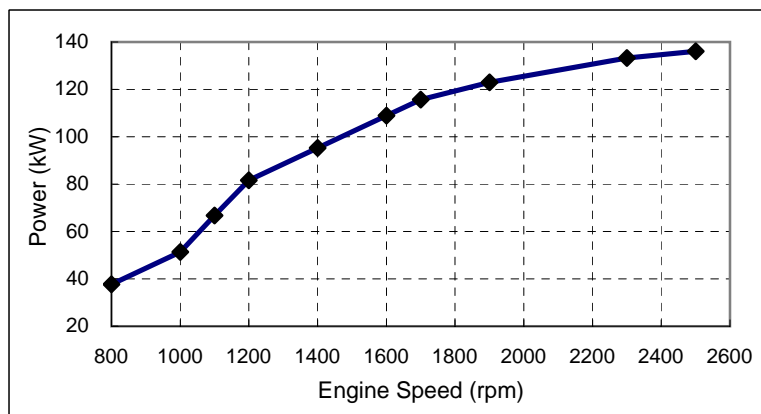
Stroke: 124 mm

Fuel System: Bosch (HPCR)



Torque

rpm	N.m
800	450
1000	490
1100	580
1200	650
1400	650
1600	650
1700	650
1900	618
2300	553
2500	520



Power

rpm	kW
800	38
1000	51
1100	67
1200	82
1400	95
1600	109
1700	116
1900	123
2300	133
2500	136

Performance data shown is nominal, and is to 80/1269/EEC(as amended) conditions of 990mbar barometric pressure and 25 deg C air intake temperature.

All data are based on the engine operating with fuel system, water pump, lubricating oil pump and with inle restriction and exhaust restriction at or below datasheet limits. Not included are compressor,fan,alternator, optional equipment and driven components.



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Engine Performance Curve FR92152

General

Certification: GB 17691—2005
 Compression Ratio: 17.3:1

Air Intake System

Max. temperature rise between ambient air and turbo air inlet: 15 °C
 Max. intake restriction with dry type air cleaner, with clean filter
 Medium Duty: 2.9 kPa
 Heavy Duty: 3.7 kPa
 Max. intake restriction with dirty filter: 6.2 kPa

Charge Air Cooling

Max. temperature rise between ambient air and intake manifold: 30 °C
 Max. ΔP between turbo out and manifold in: 13.5 kPa
 Intake pipe size normally acceptable: 65 mm dia

Exhaust System

Max. back pressure imposed by complete exhaust system: 10 kPa
 Exhaust pipe size normally acceptable: 75 mm dia

Cold Start Performance

Min. unaided cold start temperature: -12 °C @120 average rpm
 Min. aided cold start temperature: -35 °C @120 average rpm

Performance Data

Idle Speed: 600 - 800 rpm
 Maximum no load governed speed: 2850 rpm
 Maximum over speed capability(15secs max.): 4200 rpm
 Maximum altitude for continuous operation: 4700 m
 Clutch engagement torque at 800rpm: 450 N.m
 When using exhaust brakes:
 Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: 413 kPa
 Approximate engine retardation: TBD kW

Engine Speed RPM	Oil Pressure kPa	Air to Turbo m³/min	Air From Turbo		Exhaust Flow m³/min	Exhaust Temp °C	Fuel Consumption kg/hr	Coolant Flow l/min	Heat Rejection		Friction Power kW
			Flow kg/min	Pressure Pa					Coolant kW	Air kW	
2500	418.9	10.17		152.1		516.854		246.5667	63.7	19.4	23.0
2300	414.7	9.72		154.3		556.891		226.6333	66.9	20.4	19.0
1400	332.5	5.93		136.8		552.47		140.9667	51.68178	11.0327	11.0

All values within $\pm 5\%$

Base engine data refer to Datasheet D323002BX03

All data subject to change without notice. Dongfeng Cummins Engine Co., Ltd